



September 8, 2011

Via electronic mail

Mr. Tom Howard, Executive Officer  
State Water Resources Control Board  
1001 I Street  
Sacramento, CA 95814

**Re: *Comments on June 7, 2011 Draft Waste Discharge Requirements (WDRs) for Storm Water Discharges from Small Municipal Separate Storm Sewer Systems (MS4s) (General Permit)***

Dear Mr. Howard:

On behalf of the Natural Resources Defense Council (“NRDC”), Heal the Bay, and the California Coastkeeper Alliance (collectively “Environmental Groups”), we are writing with regard to the Draft Waste Discharge Requirements (WDRs) for Storm Water Discharges from Small Municipal Separate Storm Sewer Systems (MS4s) (General Permit), NPDES General Permit No. CASXXXXXX (“Draft Permit”). We appreciate the opportunity to comment on the Draft Permit. While we believe the Draft Permit represents an important step forward from Order No. 2003-005-DWQ, and appreciate the willingness of Board staff to engage in discussion of the Draft Permit’s terms, we are concerned that in several aspects the Draft Permit will not serve to adequately protect California’s water resources, and falls short of the requirements of the Clean Water Act’s “maximum extent practicable” (“MEP”) standard. We have focused our comments in particular here on the Draft Permit’s Post Construction Storm Water Management and Water Quality Monitoring and BMP Assessment provisions, and look forward to working further with Board staff to strengthen the Draft Permit.

I. Stormwater is a Leading Source of Pollution to Surface Waters and Must be Reduced to the Maximum Extent Practicable

The U.S. EPA considers urban runoff to be “one of the most significant reasons that water quality standards are not being met nationwide.”<sup>1</sup> As the U.S. EPA has stated:

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<sup>1</sup> U.S. General Accounting Office (June 2001) *Water Quality: Urban Runoff Programs*, Report No. GAO-01-679, available at, <http://www.gao.gov/new.items/d01679.pdf>. See also, Draft Permit at Findings 2-6, 8.

Most stormwater runoff is the result of the man-made hydrologic modifications that normally accompany development. The addition of impervious surfaces, soil compaction, and tree and vegetation removal result in alterations to the movement of water through the environment. As interception, evapotranspiration, and infiltration are reduced and precipitation is converted to overland flow, these modifications affect not only the characteristics of the developed site but also the watershed in which the development is located. Stormwater has been identified as one of the leading sources of pollution for all waterbody types in the United States. Furthermore, the impacts of stormwater pollution are not static; they usually increase with more development and urbanization.<sup>2</sup>

Consistent with the federal Clean Water Act, a fundamental goal of all municipal stormwater permits is to ensure that discharges from storm sewers do not cause or contribute to a violation of water quality standards. (33 U.S.C. § 1341.) Notably for MS4s covered under the National Pollutant Discharge Elimination System (“NPDES”) program, a fundamental requirement is that permits for discharges from municipal storm sewers “shall require controls to reduce the discharge of pollutants to the maximum extent practicable.” (33 U.S.C. § 1342(p)(3)(B)(iii).) These requirements apply to small MS4s such as those covered under the Draft Permit. (64 Fed. Reg. 68,722, 68754 (“EPA interprets this standard to apply to all MS4s, including . . . the small MS4s regulated under [the Phase II rule]”).) As one state hearing board held:

[MEP] means to the fullest degree technologically feasible for the protection of water quality, except where costs are wholly disproportionate to the potential benefits.... This standard requires more of permittees than mere compliance with water quality standards or numeric effluent limitations designed to meet such standards.... The term “maximum extent practicable” in the stormwater context implies that the mitigation measures in a stormwater permit must be more than simply adopting standard practices. This definition applies particularly in areas where standard practices are already failing to protect water quality....

*(North Carolina Wildlife Fed. Central Piedmont Group of the NC Sierra Club v. N.C. Division of Water Quality* (N.C.O.A.H. October 13, 2006) 2006 WL 3890348, Conclusions of Law 21-22 (internal citations omitted).) The North Carolina board further found that the permits in question violated the MEP standard both because commenters highlighted measures that would reduce pollution more effectively than the permits’ requirements and because other controls, such as infiltration measures, “would [also] reduce discharges more than the measures contained in the permits.” (*Id.* at Conclusions of Law 19.)

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<sup>2</sup> U.S. Environmental Protection Agency (December 2007) *Reducing Stormwater Costs through Low Impact Development (LID) Strategies and Practices*, at v, available at, <http://www.epa.gov/owow/nps/lid/costs07/>.

Where the use of specific best management practices (“BMPs”) and performance standards in stormwater permits is widespread across the state or country, it provides ample evidence as to their “practicability.” Thus, as the MEP standard evolves, “general permits issued under Phase II will ordinarily contain numerous substantive requirements. . . .” (*Environmental Defense Center, Inc. v. EPA* (9th Cir. 2003) 344 F.3d 832, 854.)

II. The Draft Permit Must Require Full Onsite Retention of the 85<sup>th</sup> Percentile Storm for All Regulated Projects Where Technically Feasible

Regulatory bodies in a wide variety of jurisdictions, including in California, have already successfully implemented requirements to retain a specified volume of rainfall onsite through low impact development (“LID”) practices such as infiltration, harvesting and reuse, or evapotranspiration, thus ensuring that pollutant loads do not reach receiving waters. These include, for example:

**Central Coast, CA:** MS4 permit limits impervious surfaces that generate runoff at development projects to between three and ten percent of total project area as a permanent criterion;<sup>3</sup>

**Federal Buildings over 5,000 square feet:** manage onsite (*i.e.*, prevent the offsite discharge of) the 95<sup>th</sup> percentile storm through infiltration, harvesting, and/or evapotranspiration;<sup>4</sup>

**West Virginia:** Statewide Phase II MS4 permit requires on-site retention of “the first one inch of rainfall from a 24-hour storm” event unless infeasible;<sup>5</sup>

**Philadelphia, PA:** Infiltrate the first one inch of rainfall from all impervious surfaces; if onsite infiltration is infeasible, the same performance must be achieved offsite;<sup>6</sup> and,

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<sup>3</sup> Central Coast Regional Water Quality Control Board, Letter from Roger Briggs re: Notification to Traditional, Small MS4s on Process for Enrolling under the State’s General NPDES Permit for Storm Water Discharges (Feb. 15, 2008), available at, [http://www.waterboards.ca.gov/centralcoast/water\\_issues/programs/stormwater/muni\\_phase2/ms4enrollment/docs/phasellnotifications021228.pdf](http://www.waterboards.ca.gov/centralcoast/water_issues/programs/stormwater/muni_phase2/ms4enrollment/docs/phasellnotifications021228.pdf).

<sup>4</sup> 42 U.S.C. § 17094; U.S. EPA (2009) Technical Guidance on Implementing the Stormwater Runoff Requirements for Federal Projects, at 12, available at, [http://www.epa.gov/owow/NPS/lid/section438/pdf/final\\_sec438\\_eisa.pdf](http://www.epa.gov/owow/NPS/lid/section438/pdf/final_sec438_eisa.pdf).

<sup>5</sup> State of West Virginia Department of Environmental Protection, Division of Water and Waste Management, General National Pollution Discharge Elimination System Water Pollution Control Permit, NPDES Permit No. WV0116025 at 13-14 (June 22, 2009), available at, <http://www.dep.wv.gov/WWE/Programs/stormwater/MS4/permits/Documents/WV%20MS4%202009%20General%20Permit.pdf>.

**Ventura County:** MS4 permit requires onsite retention of ninety-five percent of rainfall from the 85<sup>th</sup> percentile storm; offsite mitigation allowed if onsite retention is technically infeasible.<sup>7</sup>

Very similar onsite retention requirements have also been required for new and redevelopment sites in Orange County,<sup>8</sup> parts of Washington, D.C.,<sup>9</sup> and the State of Pennsylvania.<sup>10</sup> These jurisdictions have recognized the paramount importance of mandating onsite retention of a certain quantity of stormwater since onsite retention prevents *all* pollution in that volume of rainfall from being discharged to receiving waters.

In addition to the environmental benefits provided by use of LID practices that retain water onsite, use of LID in place of conventional engineered stormwater controls often results in substantial financial savings. The U.S. EPA has stated that “[i]n the vast majority of cases . . . implementing well-chosen LID practices saves money for developers, property owners, and communities while protecting and restoring water quality.”<sup>11</sup>

- a. The Draft Permit Fails to Meet the MEP Standard Because it Exempts Permittees From the Permit’s Water Quality Runoff Standards, Creates Unjustifiably Large Thresholds for Application of the Standards, and Fails to Create Sufficient Requirements for Alternative Compliance

While we are pleased to see that the Draft Permit establishes requirements broadly for projects to retain, or “capture, infiltrate, and evapotranspire the runoff from the 85<sup>th</sup> percentile

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<sup>6</sup> City of Philadelphia (Jan. 29, 2008) Stormwater Management Guidance Manual 2.0, at 1.1, available at, <http://www.phillyriverinfo.org/programs/subprogrammmain.aspx?Id=StormwaterManual>.

<sup>7</sup> Los Angeles Regional Water Quality Control Board (July 8, 2010) Ventura County Municipal Separate Stormwater National Pollutant Discharge Elimination System (NPDES) Permit; Order No. R4-2009-0057; NPDES Permit No. CAS004002.

<sup>8</sup> Santa Ana Regional Water Quality Control Board (May 22, 2009) Order No. RB8-2009-0030 (North Orange County MS4 Permit); San Diego Regional Water Quality Control Board (December 16, 2009) Order No. R9-2009-0002 (South Orange County MS4 Permit).

<sup>9</sup> Anacostia Waterfront Corporation Final Environmental Standards (June 1, 2007), at 16, available at, <http://www.dcappleseed.org/library/EnvironmentalStandards1.pdf>.

<sup>10</sup> Pennsylvania Department of Environmental Protection, Pennsylvania Stormwater Best Management Practices, at 8.3.3.4 (Dec. 3, 2006), available at, <http://www.elibrary.dep.state.pa.us/dsweb/View/Collection-8305>.

<sup>11</sup> U.S. Environmental Protection Agency (December 2007) *Reducing Stormwater Costs through Low Impact Development (LID) Strategies and Practices*, at iii.

storm” to the MEP,<sup>12</sup> the Draft Permit exempts numerous Permittees from having to implement this requirement, and for others, creates an unjustifiably large project size threshold for required compliance. Further, in cases where the full volume of runoff from the 85<sup>th</sup> percentile storm cannot be retained onsite, for many or most projects the Draft Permit requires only that the project treat the runoff using “flow-through” devices, a demonstrably inferior means of addressing stormwater pollution compared with LID practices that capture, infiltrate, or evapotranspire runoff. As a result, the Draft Permit should be revised to require all Permittees to comply with the Draft Permit’s Water Quality Runoff Standards and to ensure that all projects must perform off-site mitigation to achieve equivalent pollutant load and runoff volume reduction for any runoff from the 85<sup>th</sup> percentile storm that is not retained onsite.

i. The Draft Permit Should Require Onsite Retention of the 85<sup>th</sup> Percentile Storm for all MS4s

The Draft Permit proposes to exempt “New Traditional Small MS4 Permittees with a population of 25,000 or less” and “Renewal Traditional Small MS4 Permittees with a population of 25,000 or less” from the Post-Construction Requirements of the Permit, in favor of compliance with the requirements of State Board Order No. 2009-0009-DWQ. (Draft Permit at ¶ E.12.b), d).)<sup>13</sup> With respect to the onsite retention of stormwater, however, the requirements of Order 2009-0009-DWQ are far less stringent or protective of water quality than the Draft Permit’s requirement that Permittees retain runoff from the 85<sup>th</sup> percentile storm. Under 2009-0009-DWQ, projects are required to “replicate the pre-project runoff water balance (defined as the amount of rainfall that ends up as runoff) for the smallest storms up to the 85<sup>th</sup> percentile storm event, or the smallest storm event that generates runoff, whichever is larger.”<sup>14</sup> This

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<sup>12</sup> Numerous MS4 permits in California have implemented requirements for retention of the 85<sup>th</sup> percentile or design storm volume, using technical feasibility as the metric for performance. We suggest that section E.12.b.3 of the Draft Permit be revised to state that use of alternative compliance or offsite mitigation may be allowed only in the event that it is technically infeasible to retain runoff onsite at the project, and to establish a set of feasibility criteria. See, e.g., Los Angeles Regional Water Quality Control Board, Order No. R4-2009-0057, at ¶ 4.E.2.(a), (b); Santa Ana Regional Water Quality Control Board, Order No. RB8-2009-0030, at ¶ XII.E.1.

<sup>13</sup> While we focus on traditional MS4s in this portion of the comment, we note that many non-traditional MS4s that will be exempt from meeting the Draft Permit’s onsite retention requirements under ¶ E.12.f) would nevertheless be capable of retaining the runoff produced by the 85<sup>th</sup> percentile storm, and should be required to do so. In any case, as discussed below, the standard for retention of runoff articulated in State Board Order No. 2009-0009-DWQ is not adequately protective of water quality, and the permit should be revised accordingly.

<sup>14</sup> State Water Resources Control Board, Order No. 2009-0009-DWQ, at 41, ¶ XIII.A.3. We note as well that the currently proposed size threshold of one acre for projects would fail to require any control on runoff for a significant number of projects with the potential to discharge pollutants to the MS4 system.

standard, which appears to define pre-project to mean those developed conditions immediately prior to construction, would allow for substantially more runoff than would occur from retention of the full 85<sup>th</sup> percentile storm.

Permits throughout California, including in Phase II communities in the Central Coast, have established the practicability of onsite retention of the 85<sup>th</sup> percentile storm (and standards for federal buildings have established the practicability of a 95<sup>th</sup> percentile storm retention standard nationwide).<sup>15</sup> Imposing a standard that requires less than what has been demonstrated practicable throughout California and other corners of the country would, by definition, fail to require controls to the *maximum* extent practicable. As the standard *is* practicable, it must be required for all regulated projects, not just for those in larger or renewal MS4s. Moreover, there is substantial reason to require full onsite retention of the 85<sup>th</sup> percentile storm rather than only replication of the “pre-project water balance,” as the looser, pre-project standard will almost always represent conditions that result in the discharge of pollutants to MS4 systems. For example, under the 2009-0009-DWQ standard, for a project replacing an existing parking lot with a large commercial development, the project would only have to retain the same volume of water onsite as was retained by the existing parking lot. This would allow for impervious surfaces that generate polluted runoff to persist in the built environment effectively indefinitely.

Nor would the standard be appropriate even if it were changed to require retention of the pre-development water balance, defined to mean the runoff that would occur under natural, pre-European development conditions. Developed sites result in the introduction of higher pollutant loads than occur from pre-development surfaces. Where a pre-development site may, due to soil, slope, or other conditions, result in high volumes of runoff, allowing for equally high volumes of runoff to occur after development would result in a substantial increase in the discharge of pollutants. Thus, use of a specific storm retention volume, in this case the 85<sup>th</sup> percentile 24-hour storm event, is warranted in order to ensure that metals, oils, pathogens, trash, nutrients, and other contaminants associated with development are not transported to receiving waters.

The requirement to retain runoff from the 85<sup>th</sup> percentile storm onsite is particularly necessary for smaller MS4s, including those with populations of 25,000 or less, which include areas that may not yet have seen large scale development and whose receiving waters are still pristine.<sup>16</sup> As detailed above, most runoff is the result of man-made development in the

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<sup>15</sup> See Also, California Ocean Protection Council (May 15, 2008) *Resolution of the California Ocean Protection Council Regarding Low Impact Development*, at 2 (“LID is a practicable and superior approach . . . to minimize and mitigate increases in runoff and runoff pollutants and the resulting impacts on downstream uses, coastal resources and communities”), available at, <http://www.opc.ca.gov/2008/05/resolution-of-the-california-ocean-protection-council-regarding-low-impact-development/>.

<sup>16</sup> Renewal MS4 Permittees in particular, which have been subject to discharge requirements under the existing Phase II General Permit since 2003, are already familiar with the permitting structure and requirements of the NPDES program and should not be exempted from critical terms such as the Draft Permit’s Water Quality Runoff Standards.



landscape. Regional Boards in California have repeatedly recognized that even small increases in impervious surface within an area can have significantly deleterious effects on surface waters. For example, the Los Angeles Regional Board recently noted that, “[s]tudies have demonstrated a direct correlation between the degree of imperviousness of an area and waterbody degradation . . . Significant declines in the biological integrity and physical habitat of streams and other receiving waters have been found to occur with as little as 3-10 percent conversion from natural to impervious surfaces in a subwatershed.”<sup>17</sup> Given the need to protect such watersheds, it is critical that the permit apply the requirement to retain the runoff produced by the 85<sup>th</sup> percentile storm to all small MS4s, not only those above a certain size threshold.

- ii. Any Project for Which it is Not Feasible to Retain Runoff Onsite Should Be Required to Capture, Infiltrate, or Evapotranspire Runoff Resulting in Equivalent Pollutant Load and Volume Reduction Within the Same Watershed.

As detailed above, use of LID practices that retain runoff are a “superior” means of addressing the problems posed by stormwater pollution. However, where such practices may be infeasible either in part or in all, in many cases the Draft Permit fails to adequately protect receiving waters. The Draft Permit requires, for projects “located in subwatersheds that have a high rank for groundwater recharge and/or discharge” that the project must capture, infiltrate, or evapotranspire any runoff produced by the 85<sup>th</sup> percentile storm not retained onsite. (Draft Permit at ¶ E.12.b.3.) For projects outside of a “high rank for groundwater recharge and/or discharge” subwatershed, the Draft Permit requires only that they treat runoff “via a flow-through device designed to treat runoff at a flow rate produced by a rain event equal to at least two times the 85<sup>th</sup> percentile hourly rainfall intensity.” (*Id.*) These requirements fail to meet the Clean Water Act requirements that the Draft Permit “shall require controls to reduce the discharge of pollutants to the maximum extent practicable” for three reasons, each of which should be corrected in the Draft Permit.

First, the requirement to capture, infiltrate, or evapotranspire runoff elsewhere within the same watershed should be required for all regulated projects, not only for those located within a “high rank” watershed. Indeed, as infiltration potential is by definition likely to be high, projects in this category are among the least likely to find it infeasible to retain the runoff from the 85<sup>th</sup> percentile storm onsite, and therefore need an alternate means of compliance. For all those projects not located within a high rank subwatershed, however, the permit allows for compliance with its Water Quality Runoff Standards provision to be met through use of “flow-through devices” which are a demonstrably inferior method of reducing pollution in stormwater runoff. Retaining the 85<sup>th</sup> percentile storm runoff volume onsite would prevent 100 percent of the runoff from the 85<sup>th</sup> percentile storm, and therefore, 100 percent of the pollutants in that runoff, from

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<sup>17</sup> Los Angeles Regional Water Quality Control Board Order No. R4-2009-0057, at Finding B.16. See also, Center for Watershed Protection (March 2003) Impacts of Impervious Cover on Aquatic Systems, available at, [http://www.cwp.org/documents/cat\\_view/78-other-center-publications.html](http://www.cwp.org/documents/cat_view/78-other-center-publications.html).

ever reaching receiving waters. In contrast, under the Draft Permit, a project could implement a vault-based system with conventional treatment BMPs (such as sand filters) that for the same volume of runoff, would only attenuate just slightly over half of the total suspended solids (TSS), 40 percent of the total zinc (TZn), and one-third of the total copper (TCu) and total phosphorous (TP) in that volume of runoff.<sup>18</sup> Even at two times the rainfall intensity of the 85<sup>th</sup> percentile storm, this type of device will fail to reduce pollutants in stormwater to nearly the same level as will onsite retention. As a result, retention, either onsite where feasible, or offsite where it is not, should be required for all regulated projects.

Second, the Draft Permit currently only requires that a project capture, infiltrate, or evapotranspire the “volume of runoff equivalent to the excess volume” not retained onsite, (Draft Permit at ¶ E.12.b.3.), but does not require that the project account for the pollutant load generated. As a result, a project that results in development of a parking lot or industrial site that may generate a substantial amount of pollution in the form of metals, oils, or other contaminants but for which it is not feasible to retain runoff onsite, could perform offsite mitigation by reducing the volume of runoff generated at a residential site that would generate substantially lower pollutant loads. Section E.12.b.3 of the Draft permit should be revised to require any project performing offsite mitigation as a result of infeasibility of onsite retention to account for both the volume and pollutant load generated by runoff in excess of that not retained onsite.<sup>19</sup>

Third, even if the segregated approach adopted by the Draft Permit regarding “high rank” groundwater subwatersheds were permissible under the MEP standard, or even advisable, the term “high rank for groundwater recharge and/or discharge” does not appear to be defined in the Draft Permit. This allows for the possibility that the term will be later defined in such a way as to restrict application of the requirement to only a select few projects. In the event the term is retained in the Draft Permit it must be defined in the broadest manner possible, to ensure that the maximum number of projects will result in the onsite retention of stormwater.

iii. The Draft Permit’s Interim Hydromodification Management Provisions Should Require Compliance with Pre-Development, not Pre-Project, Conditions

As discussed above, requirements that a project meet pre-project conditions are not adequately protective of water quality, and will ensure that impervious surfaces that generate polluted runoff or high volumes of runoff persist in the built environment effectively indefinitely. This is of particular concern with regard to the effects of hydromodification. Recent studies conducted in California indicate that intermittent and ephemeral streams are even more

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<sup>18</sup> R. Horner (2009) *Assessment of Hydrologic and Water Quality Implications of Stormwater Management under Provisions of the San Francisco Bay Region Municipal Regional Stormwater NPDES Permit*, at 4-5.

<sup>19</sup> See, e.g., Los Angeles Regional Water Quality Control Board, Order No. R4-2009-0057, at ¶ 4.E.2(c)(2)



susceptible to the effects of hydromodification than streams from other regions of the U.S. with stream degradation being recognized when the associated catchment's impervious cover is as little as 3-5%.”<sup>20</sup> In order to address the presence of impervious surfaces that generate runoff contributing to flooding, erosion, and other volume related impacts to receiving waters, the Draft Permit should use the term “pre-development” in place of “pre-project” in its hydromodification criteria under section E.12.b.4. The Draft Permit should also clearly state that “pre-development” refers not to the condition of a site prior to construction of the particular project under review, but rather the condition of a site in its *undeveloped* state. (Draft Permit at ¶ E.11.b.5.)

III. The Draft Permit Must Address Both Discharges to Areas of Special Biological Significance and to Environmentally Sensitive Areas

a. The Draft Permit Must Include Specific Provisions to Eliminate Waste Discharges into Areas of Special Biological Significance

Environmental Groups have advocated for the implementation of the decades-old Ocean Plan discharge prohibition for years, and have been similarly active in the process to address the ongoing discharges to Areas of Special Biological Significance (“ASBSs”). ASBSs are home to the state's most unique and sensitive marine communities, each one encompassing a complex and fragile ecosystem.<sup>21</sup> To protect these communities, the State Board deliberately adopted a prohibition in the Ocean Plan on waste being discharged into ASBSs, thereby recognizing that the discharge of waste affects the maintenance of natural water quality. The California Ocean Plan states that:

Waste shall not be discharged to areas designated as being of special biological significance. Discharges shall be located a sufficient distance from such designated areas to assure maintenance of natural water quality conditions in these areas.<sup>22</sup>

Like other water quality standards, the ASBS waste discharge prohibition is incorporated into, and is an enforceable requirement of, *all NPDES permits* coastwide. In violation of the Clean Water Act, however, the State Board fails to take action against dischargers who have not received an exception to the Ocean Plan. As the California Appellate Court has stated, the State

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<sup>20</sup> Los Angeles Regional Water Quality Control Board, Order No. R4-2009-0057, at Finding B.16.

<sup>21</sup> *See, e.g.*, State Water Resources Control Board (Jan. 18, 2011) Program Draft Environmental Impact Report, Exception to the California Ocean Plan for Areas of Special Biological Significance Waste Discharge Prohibition for Storm Water and Nonpoint Source Discharges, with Special Protections, at sections 5.1 and 5.5, available at, [http://www.swrcb.ca.gov/water\\_issues/programs/ocean/docs/asbs/asbspeir\\_draft2011jan.pdf](http://www.swrcb.ca.gov/water_issues/programs/ocean/docs/asbs/asbspeir_draft2011jan.pdf).

<sup>22</sup> 2009 California Ocean Plan, Sec. III.E.1.

Board cannot make a *de facto* amendment to a water quality objective in a water quality control plan by simply refusing to take the action that it has identified as necessary to achieve that objective, (see, *State Water Resources Control Bd. Cases* (2006) 136 Cal.App.4th 674, 731), or by affirmatively choosing to avoid enforcement of the prohibition.

Unless an exception has been obtained, the Ocean Plan prohibits discharge of waste (including stormwater runoff) into ASBSs, and discharges near ASBSs must be located a sufficient distance away to ensure maintenance of natural water quality. The Board must incorporate discharge controls into the Draft Permit that eliminate Permittees' illegal discharges into ASBSs. Additionally, ASBS-specific monitoring requirements should be added to track the progress of waste discharge reductions into ASBSs.

b. The Draft Permit Definitions for Regulated Projects Must Address Discharges to Environmentally Sensitive Areas

We note that the Draft Permit does not currently specify any Regulated Special Project Category for sites that discharge to Environmentally Sensitive Areas ("ESAs"). The Draft Permit should require that any project that will create and/or replace 2,500 square feet or more of impervious surface (collectively over the entire project site) or that will increase the area of imperviousness of a proposed project site to 10 percent or more of its naturally occurring condition, and that discharges to an ESA, must meet the Water Quality Runoff Standards. In addition, all new development and redevelopment projects must meet any other requirement of California law governing discharges to ESAs. For example, as described above, the California Ocean Plan provides, "Waste shall not be discharged to areas designated as being of special biological significance. Discharges shall be located a sufficient distance from such designated areas to assure maintenance of natural water quality conditions in these areas."<sup>23</sup>

IV. The Draft Permit Must Include All Applicable TMDL Waste Load Allocations

Section E.15 of the Draft Permit appropriately requires that Permittees comply with all applicable TMDL Waste Load Allocations ("WLAs"). Attachment G of the Draft Permit outlines TMDL WLAs and specific implementation requirements. However, this Attachment is incomplete. For instance, there are no Region 4 TMDLs listed. This is obviously an oversight, as there are TMDLs in effect in Region 4 that would apply to certain Phase II Permittees. State Board staff should coordinate with Region 4 and all other regions to ensure that all applicable TMDL WLAs and implementation measures are reflected in Attachment G. The Draft Permit is the regulatory mechanism that makes the TMDL and its requirements enforceable, thus it is critical to include all applicable TMDLs in the Permit.

V. The Draft Permit's Monitoring Program Must be Significantly Strengthened

The Clean Water Act and its implementing regulations explicitly require monitoring for NPDES permits. (See 33 U.S.C. § 1318(a); 40 C.F.R. §§ 122.48, 122.41.) The Clean Water Act

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<sup>23</sup> Ocean Plan, Sec. III.E.1., at 20

mandates, “The Administrator shall require the owner or operator of any point source to . . . install, use and maintain such monitoring equipment and methods”, which includes biological monitoring and sampling of effluent. (33 U.S.C. § 1318(a).) Likewise, the federal regulations direct: “All permits shall specify. . . [r]equired monitoring including type, intervals, and frequency.” (40 C.F.R. §§ 122.48; 122.41(j).) Because these monitoring requirements dominate the Clean Water Act’s permitting program, the Act clearly views monitoring as an integral part of all permits. Several elements of the draft Monitoring Program under section E.13 of the Draft Permit must be strengthened in order to meet this requirement. The Permit must contain minimum monitoring requirements, which are necessary to assess compliance and impacts from the MS4. The monitoring elements outlined below must be included in the Permit.

a. Outfall Monitoring

The Draft Permit does not include any monitoring at end-of-pipe outfalls. The State Board and regional boards must include this type of monitoring for compliance-assurance purposes. Further, the State Board should require land-use monitoring in order to identify the specific sources of particular pollutants. Drainages carrying stormwater from commercial, industrial, and high-use transportation should be prioritized. In addition to outfall monitoring, there should be downstream receiving water monitoring for each outfall monitoring station to determine if MS4 discharges are causing or contributing to exceedences of water quality standards.

b. TMDL Monitoring

We support the inclusion of TMDL monitoring requirements and other TMDL implementation milestones in Attachment G of the Draft Permit. We also support the inclusion of milestones that may be outside of the permit term, in the event that the General Permit is administratively extended which is frequent occurrence. “[O]nce a TMDL is developed, effluent limitations in NPDES permits must be consistent with the WLA’s in the TMDL.” (*Communities for a Better Env’t v. State Water Res. Control Bd.* (2005) 132 Cal.App.4th 1313, 1322 (citing 40 C.F.R. § 122.44(d)(1)(vii)(B) (NPDES permits must be “consistent with the assumptions and requirements of any available waste load allocation for the discharge prepared by the State and approved by the EPA”)); see also, *City of Arcadia v. State Water Resources Control Board* (2006) 135 Cal.App.4th 1392, 1404.) As a result, TMDL requirements such as monitoring must be included in the Permit, as all requirements are vital steps in ensuring that dischargers are on-track for ultimate compliance with a TMDL’s waste load allocations. The Draft Permit is the regulatory mechanism that makes the TMDL and its requirements enforceable, thus it is critical to include all these requirements to ensure that they are actually undertaken by the Permittee and that water quality standards are attained. As discussed above, staff must ensure that all TMDLs that are in effect and have relevant wasteload allocations are included in Attachment G and that this list is regularly updated.

c. Beach Water Quality Monitoring

Stormwater runoff is a major source of beach bacteria pollution. The Permittees must be on hand to undertake beach water quality monitoring at stormwater impacted sites should the Health Department discontinue weekly monitoring, as this program is crucial to a major public health issue. Thus, we support the Draft Permit's requirement that Permittees discharging to AB 411 beaches must comply with the Ocean Plan monitoring requirements. Specifically, the Ocean Plan requires weekly bacteria indicator samples from each site.<sup>24</sup> Of note, Table B in the Draft Permit is not consistent with the Ocean Plan and should be updated with an additional row for marine bacteria monitoring. The Permit must additionally state clearly that monitoring be conducted in accordance with AB 411 procedures. Lastly, the Permit should specify that monitoring take place at the wave-wash directly in front of stormdrain and stream sources (point zero). This is necessary to ensure that the waters closest to the discharge are evaluated.

d. Toxicity Monitoring

As seen on the map of impaired waterbodies from the 2010 Integrated Report — 303(d) Listed Waters for Toxicity,<sup>25</sup> waterbodies throughout the state are impaired by toxicity. In fact, toxicity has been observed in all nine regions according to a recent report released by SWAMP entitled *Summary of Toxicity in California Waters: 2001-2009*.<sup>26</sup> Of the 992 sites assessed by the SWAMP program, 473 sites (48%) had at least one sample where toxicity was observed and 129 sites (13%) were classified as highly toxic.<sup>27</sup>

Storm water often contains metals, oils, pesticides, and other contaminants that can be extremely toxic to aquatic life. (See Draft Permit, at Findings 2-6.) SCCWRP and numerous local government monitoring programs have demonstrated that MS4 discharges are frequently toxic. Notwithstanding the California Toxics Rule ("CTR") and narrative water quality standards that address toxicity and with which stormwater dischargers must comply, there are numerous California waterways listed as impaired for aquatic toxicity on the CWA §303(d) list, and MS4 discharges are often a source of this impairment. Thus, we support the inclusion of sediment toxicity monitoring in the Draft Permit. However, the monitoring requirements should also include outfall toxicity monitoring, in order to evaluate if stormwater is causing or contributing to toxic impacts of aquatic life. This monitoring should be conducted at all monitoring locations at least on a *quarterly* basis, as toxicity can often be intermittent.

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<sup>24</sup> California Ocean Plan, at Section III.D.1.

<sup>25</sup> Available at, [http://www.swrcb.ca.gov/water\\_issues/programs/tmdl/integrated2010.shtml](http://www.swrcb.ca.gov/water_issues/programs/tmdl/integrated2010.shtml).

<sup>26</sup> State Water Resources Control Board, Surface Water Ambient Monitoring Program (November, 2010) *Summary of Toxicity in California Waters: 2001-2009*, available at [http://www.swrcb.ca.gov/water\\_issues/programs/swamp/docs/reports/tox\\_rpt.pdf](http://www.swrcb.ca.gov/water_issues/programs/swamp/docs/reports/tox_rpt.pdf).

<sup>27</sup> *Id.*

VI. BMP Implementation Strategies Should Be Strengthened

One of the most significant shortcomings in previous stormwater permits is the lack of performance-based criteria for BMPs. As a result, BMPs are added as part of permit requirements or pollution abatement efforts without any focus on the quality of the water exiting the BMPs. An effective way to ensure the success of stormwater programs and the attainment of water quality standards is to assess BMPs based on performance. Flow-based design criteria are simply not adequate to ensure that water quality standards are consistently met because flow, and corresponding BMP size, is but one factor determining BMP effectiveness.

While we recognize that the Draft Permit includes “Program Effectiveness Assessment and Improvement” requirements (Draft Permit at ¶ E.14.) and that this is an improvement from the current permit, we believe that this section should be further strengthened. In order to ensure that BMPs are truly designed to the MEP and ensure that Permittees’ discharges meets water quality standards, we recommend that the draft Permit require a performance evaluation for all structural (or engineered) best management practices used by the discharger to comply with the Permit, including retrofits and iterative requirements. Specifically, at least once per permit cycle, the Permittee should submit a report to the State Board or regional board that includes a BMP performance evaluation. The report should identify three selected structural BMPs for each targeted pollutant of concern, and then detail an analysis on the efficacy of those BMPs for removing the identified pollutants of concern, in terms of pollutant removal efficiency and effluent water quality. The Permittee would then select the best performing BMP of the three for each targeted pollutant. This evaluation will help determine the structural management practices that are truly the “best” management practices. This type of evaluation is also particularly necessary for discharges into impaired waters and ASBSs, for which BMP effectiveness is particularly critical. Finally, all BMPs installed should be designed to handle the 85<sup>th</sup> percentile storm, which is currently the mandate in SUSMP requirements. This process will help move Permittees further towards water quality standards attainment.

VII. The Trash Reduction Program Should be Consistent with the State Board’s Pending Statewide Trash Policy

The Draft Permit requires that all Traditional MS4 Permittees with a population greater than 25,000 shall “require at least 20 percent of the Permittee’s jurisdiction zoned, commercial retail/wholesale, comply with a Trash Abatement Plan.” (Draft Permit at ¶ E.10.) Further it requires that the Permittee adopt a trash reduction ordinance and install trash capture structural controls and enhanced maintenance measures in at least 20 percent of the commercial/retail/wholesale zones.

We fully support the State Board including a provision on trash reduction in the Draft Permit, as even minimal amounts of trash impair beneficial uses. However, this section should be strengthened in several ways to ensure that water quality standards are attained. As an overarching comment, we urge State Board staff to coordinate internally to ensure that the draft requirements are consistent with the thinking of staff that is developing the Statewide Trash Policy. In addition, the Draft Permit should explicitly define “trash capture structural controls”

as “full capture devices,” consistent with the definition in the Los Angeles River Trash TMDL. The installation of full capture devices is necessary to ensure that trash does not enter a waterbody and impair beneficial uses. Also these installed devices should capture the drainage from *all* of the areas zoned as commercial/retail/wholesale within the Phase II area. At a minimum, the Permittee should evaluate and prioritize trash hot spot areas in the community for the installation of these devices.

#### VIII. The Draft Permit Should Require Inspections of Industrial Facilities

As U.S. EPA and Water Board audits have shown time and time again, industrial sites in California are consistently in violation of MS4 permit requirements. We therefore agree with the State Board’s conclusion that inspections of industrial facilities are necessary to protect receiving waters in Phase II communities. As the Draft Permit points out, assessments of California’s MS4 program have shown that compliance with MS4 permit requirements “improves with awareness of the program and a regular presence of compliance inspectors at the facility or at other facilities in the same industry group or neighborhood.” (Draft Fact Sheet, at 28.) The National Research Council has stated that in order to “improve the industrial, construction, and MS4 permitting programs in their current configuration, EPA should . . . issue guidance for MS4 permittees on methods to identify high-risk industrial facilities for program prioritization such as inspections.”<sup>28</sup> And the U.S. EPA has stated that, while referencing inspection and oversight controls in Phase I MS4 Permits, it recommends including specific requirements “pertaining to stormwater discharges to the MS4 from industrial sources in Phase II permits to further reduce stormwater pollutants from the MS4.”<sup>29</sup> Inspections are a proper and necessary means of reducing the discharge of pollutants to the MS4 system, and Environmental Groups support their inclusion in the Draft Permit as a requirement for Phase II MS4s.

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<sup>28</sup> National Academy of Sciences, Committee on Reducing Stormwater Discharge Contributions to Water Pollution, National Research Council (2008) *Urban Stormwater Management in the United States*, at 12, available at, [http://www.epa.gov/npdes/pubs/nrc\\_stormwaterreport.pdf](http://www.epa.gov/npdes/pubs/nrc_stormwaterreport.pdf).

<sup>29</sup> U.S. EPA (April 2010) MS4 Improvement Permit Guide, EPA 833-R-10-001.

Mr. Tom Howard, Executive Officer

September 8, 2011

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IX. Conclusion

For the aforementioned reasons, the Draft Permit is not yet legally adequate and needs revision—as well as more thorough documentation—to pass legal muster under the Clean Water Act’s MEP standard and to produce the significant reductions in stormwater pollution that are feasible and necessary to meet water quality standards. We look forward to working with you and your staff to ensure the Final Permit will meet these requirements and serve to protect California’s water resources.

Sincerely,



Noah Garrison  
Project Attorney  
Natural Resources Defense Council



Kirsten James  
Director of Water Quality  
Heal the Bay



Sara Aminzadeh  
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